



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/641,703	08/15/2003	Warren Kelm	1910-A-CIP	9962
27542	7590	07/12/2005	EXAMINER	
SAND & SEBOLT AEGIS TOWER, SUITE 1100 4940 MUNSON STREET, NW CANTON, OH 44718-3615			BOMAR, THOMAS S	
			ART UNIT	PAPER NUMBER
			3672	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/641,703

Applicant(s)

KELM, WARREN

Examiner

Shane Bomar

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/28/04</u> . | 6) <input type="checkbox"/> Other: _____ |

R

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the parent application data on page 1 should be updated to reflect that the application is now US patent 6,679,559; on page 3, the recitation of "U.S. Patent No. 2,571,203" should most likely be --U.S. Patent No. 2,751,203--.

Appropriate correction is required.

Claim Objections

2. Claims 1, 9, and 22 are objected to because of the following informalities: in the recitation of "said at least one bearing which rotationally supports" in line 20 of claim 1, the use of "which" is most likely unnecessary; in claim 9, the recitation of "the counter rotating parallel auger flights" lacks proper antecedent basis since the flights were never recited as being counter rotating; and, claim 22 does not end with the required period. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 4,036,529 to Hawthorne et al.

Regarding claims 1 and 14, Hawthorne et al disclose in Figures 1, 2, and 5-7 an auger flight support 75 for supporting a plurality of auger flights 44, 45 by connecting together respective first ends of parallel auger flights, the auger flights each having a respective helical flighting affixed exteriorly therearound and having a respective outer diameter 46 and respective second ends having drive socket, the auger flights being adapted for use with an augering apparatus of the type used for rotating and advancing a plurality of side-by-side cutting heads of a drilling section, the drilling section which is driven horizontally into the side of a hill with the cutting heads driven rotationally through the drive sockets by the augering apparatus (see column 2, line 67 through column 3, line 4), the unitized auger flights being inserted between the drilling section and the augering apparatus in a rotationally coupled end-to-end manner as drilling progresses (see column 3, lines 42-47), the auger flight support 75 comprising:

- a pair of bearing housings 49 and 50;
- a pair of drive shafts 42,43 each having a first end 47 adapted to closely fit within and be affixable to the first end portion of a respective flight auger, a second end portion of mating configuration to the drive sockets, and a middle bearing portion which fits within the bearing housing (this middle bearing portion is inherent from Figs. 2 and 4);
- inherently at least one bearing is disposed within each of the bearing housings 49, 50 between the respective bearing housing and the bearing portion of the respective drive shaft, the at least one bearing rotationally supports and longitudinally retains the respective drive shaft to the bearing housing (see Fig. 5).

- a tie bar 55 interconnects the bearing housings at such a spacing that the respective of the outer boring diameters of the flightings are closely adjacent one another (see Figs. 5 and 7); and
- a support leg 76 extends downwardly from the tie bar to engage the surface of the ground lying between the parallel auger flights (see Figs. 6 and 7).

Regarding claims 2, 3, 8, and 18, said support leg is disposed on said tie bar at such a position that allows said support leg to be disposed at substantially the center of gravity of the parallel augers, the position being equidistant from each of the flights and approximately midway along the tie bar (see Figs. 5 and 7).

Regarding claims 4 and 16, said tie bar includes a downwardly depending leg mounting block 77 disposed approximately midway along the length of said tie bar and said support leg is secured to said mounting block (see Figs. 6 and 7).

Regarding claims 5, 6, and 17, it is inherent that the support leg is releasably secured to the mounting block, such as with a nut and bolt, since it is notoriously known in the art to releasable mount items that may deteriorate with wear and require replacement. For example, skids 71 are shown mounted to a plate 70 with nuts and bolts (see Fig. 8).

Regarding claims 7 and 15, the support leg and the tie bar are integrally formed (see Figs. 5-7).

Regarding claim 9, said support leg is adapted to contact the raised ledge of ground formed between the rotating parallel auger flights (see Figs. 6 and 7).

Regarding claims 10, 11, 19, and 20, said support leg further includes a foot plate 75 and the foot plate is adapted to contact the ledge of the ground between the auger flights, wherein the width of the foot plate is greater than the width of the support leg (see Figs. 6 and 7).

Regarding claims 12 and 21, said support leg is shorter in length than the diameter of the auger flights (see Fig. 7).

Regarding claims 13 and 22, said support leg is substantially parallel in an assembled position to the auger flights (see Figs. 5 and 6).

Conclusion

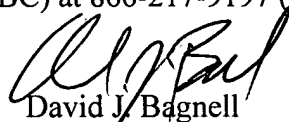
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Compton, Hawthorne et al, Kirkpatrick, and Scholl teach various other types of auger flights and supports.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 571-272-7026. The examiner can normally be reached on Monday - Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Fridays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3672

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David J. Bagnell
Supervisory Patent Examiner
Art Unit 3672

tsb 
July 8, 2005